SECTION 15.75 (A): TUBERCULOSIS EXPOSURE CONTROL POLICY
Last Updated: 11/03

GENERAL POLICY STATEMENT

The State of Iowa ensures a safe workplace environment for all employees, service recipients, and the public. To that end, the Department of Administrative Services – Human Resources Enterprise has established this policy addressing the spread of tuberculosis within the workplace and the responsibility of each state department to implement this policy.

Tuberculosis is a serious and recognized hazard. Feasible and useful abatement methods exist. The purpose of the "Tuberculosis Exposure Control Policy" is to provide minimum standards for departments to follow in developing and implementing their own tuberculosis abatement and control standards. This Tuberculosis Exposure Control Policy is based on guidance from:

- Occupational Safety and Health Administration's (OSHA) "Enforcement Policy and Procedures for Occupational Exposure to Tuberculosis."
- Centers for Disease Control and Prevention's (CDC) "Morbidity and Mortality Weekly Reports," guidelines and recommendations.
- Iowa Occupational Safety and Health's policies and procedures.

This Tuberculosis Exposure Control Policy is intended to supplement the efforts of departments and not to replace the tuberculosis control policies and abatement measures they currently implement.

NONDISCRIMINATION STATEMENT

It is illegal under the Americans with Disabilities Act to refuse to hire, accept, register, classify, or refer for employment, or to otherwise discriminate in employment against an applicant for employment or an employee because the individual has been exposed to tuberculosis. The burden shall be on the department to demonstrate, when taking an adverse action against an applicant or an employee, that the contagious disease is present, poses a direct threat to health or safety, and that no reasonable accommodation could reduce or eliminate this threat.

OCCUPATIONAL TUBERCULOSIS EXPOSURE CONTROL PROGRAM

I. Scope and Application

A. The following departments and employees shall be covered by this policy:

1. Departments with the following workplaces, as identified by OSHA "Enforcement Policy and Procedures for Occupational Exposure to Tuberculosis," which have a high risk of tuberculosis exposure:

    a. Hospitals and other health care settings.

    b. Departments other than hospitals whose employees routinely work in hospitals.

    c. Employers who deliver non-emergency health care to patients in settings other than hospitals or clinics.

    d. Correctional institutions.

    e. Homeless shelters.

    f. Long-term care facilities.

    g. Drug or alcohol treatment or counseling facilities.

h. Employers of emergency personnel.

2. Employees who are assigned to workplaces which place them in significant contact with the following groups and pose a potential risk for tuberculosis exposure:

    a. Persons known or suspected to have tuberculosis, sharing the same household or other enclosed environments.

    b. Persons infected with human immunodeficiency virus (HIV).

    c. Persons with medical risk factors known to increase the risk of disease if exposure has occurred.

    d. Foreign-born persons from countries with high tuberculosis prevalence.

    e. Medically underserved low-income populations, including high risk racial or ethnic minority populations.

    f. Alcoholics and intravenous drug users.

3. Emergency personnel and employees who are assigned as inspectors, consultants, investigators, or in similar positions to workplaces identified as having a high risk of tuberculosis exposure.

B. Any contractor that is required to perform work within an area with increased risk of tuberculosis must receive training prior to admittance or have a documented Tuberculosis Exposure Control Program prior to initiating any work that brings the contractor or contractor representatives within an area with increased risk of tuberculosis.

C. Nothing in this policy shall be construed as limiting the obligation of any state department to address the hazard of tuberculosis when the department acquires information indicating that employees are, or have been, occupationally exposed to a tuberculosis hazard in the workplace. For tuberculosis exposure to be compensable under Workers' Compensation, the following criteria must be met:

1. The exposure to the disease must be the result of a higher than normal general population risk that occurred in the course of employment.

2. Actual onset of disease must be present. The onset of disease will be determined by a qualified health care professional.

3. Diagnostic testing for medical monitoring or screening purposes will not generally be covered until the onset of the disease is confirmed. In the case of tuberculosis, the Mantoux PPD (purified protein derivative) test is a screening and monitoring test only.

D. The policies and procedures for tuberculosis exposure control will be reviewed at least annually (more frequently with changes in operations) and evaluated for effectiveness to determine the actions necessary to minimize the risk of tuberculosis transmission. This review process shall include:

1. Risk assessment evaluation.

2. Periodic reassessment.

3. Case surveillance.

4. Analysis of testing procedures.

5. Observation of employee exposure control practices.

6. Monitoring engineering control practices.

II. Tuberculosis Exposure Control Program

An effective tuberculosis infection/exposure control program requires early detection, isolation, and treatment of persons with active and infectious tuberculosis. The primary emphasis of the Tuberculosis

Exposure Control Plan will be to achieve these goals through the use of the following program control measures:

A. Initial and Periodic Risk Assessment

1. Evaluate the Mantoux PPD (purified protein derivative) test conversion data for employees identified as employed in workplaces or population groups considered at risk, by area.
2. Determine tuberculosis incidence and prevalence among service populations.
3. Analyze employee and service populations' test data, by area.

B. Written Tuberculosis Exposure Control Program

1. Document all aspects of tuberculosis control.
2. Identify individual responsible for tuberculosis control program; e.g., a site specific Tuberculosis Exposure Control Coordinator.
3. Explain and emphasize hierarchy of controls:
    a. Engineering controls
    b. Work practice controls
    c. Personal protective equipment

C. Assignment of responsibility

1. The department's responsibility:
    a. Determine specific areas and procedures that will require the use of the **Tuberculosis Exposure Control Program**.
    b. Determine measures to reduce the exposure to infectious tuberculosis.
    c. Develop and implement effective written policies and protocols to ensure the rapid detection, isolation, diagnostic evaluation, and treatment of persons likely to have tuberculosis.
    d. Implement effective work practices for employees working in these designated areas, including a respiratory protection program.
2. Management's responsibility, e.g., superintendents, supervisors, or group leaders of designated areas:
    a. Ensure that all personnel under their supervision, authority, or direction receive training and are knowledgeable of the exposure control requirements for the designated areas.
    b. Ensure that their employees comply with all facets of the **Tuberculosis Exposure Control Program**.
3. Employees' responsibility to:
    a. Become aware of the **Tuberculosis Exposure Control Program** requirements for their work areas (as explained by the department).
    b. Wear personal protective equipment according to proper instructions and for maintaining the equipment in a clean and operable condition
    c. Understand that failure to comply with the **Tuberculosis Exposure Control Program** shall lead to disciplinary action.
    d. Conduct risk assessments and periodic reassessment of the program.
4. The Tuberculosis Exposure Control Program Coordinator responsibility:

a. Administer the program.

b. Conduct annual and periodic reviews.

c. Determine program effectiveness.

d. Conduct training programs.

D. Early Detection of Tuberculosis Exposure

1. Screen for tuberculosis infection among persons at increased risk of tuberculosis or for whom the consequences of tuberculosis may be especially severe to identify those for whom preventive treatment is indicated.

2. Establish the following abatement methods:

a. Pre-placement evaluation.

b. Administration and interpretation of tuberculosis Mantoux skin tests by a licensed health care professional and at no cost to the employee:

1) For employees with a potential for occupational exposure to protect both the staff and the State's service recipients.

2) At the time of employment for all employees in the covered workplaces, unless there is a previous positive test or documented completion of adequate preventive therapy.

3) Annually for all employees assigned to workplaces identified as having a high risk of tuberculosis exposure in the covered workplaces.

4) Retested every six months for workers with frequent exposure to patients with tuberculosis or who are involved with high hazard procedures.

E. Evaluation and Management of Possible Infectious Tuberculosis

1. Establish criteria the covered department will use to determine whether a person is a suspected infectious tuberculosis case.

a. Provide, as soon as reasonably possible after discovery of a suspect infectious tuberculosis case, medical evaluation for tuberculosis and, where medically appropriate, preventive therapy to any employee or institutional resident.

2. Establish procedures to ensure immediate identification of source cases and to ensure, while maintaining appropriate confidentiality, that all source cases known to the department are identified to employees who need this information in order to take proper precautions against tuberculosis exposure.

3. Evaluate Mantoux PPD (purified protein derivative) test conversions and possible nosocomial tuberculosis transmission (see attached Flow Chart).

4. Follow-up evaluation. Ensure that all employees and service recipients who undergo preventive therapy for tuberculosis are provided all medical evaluations and services necessary to complete therapy.

F. Education

1. Affected personnel, supervisors and all levels of employees in covered departments will be given training and education pertaining to tuberculosis disease and transmission.

2. All employees within intermediate or high risk areas will be instructed in the necessary precautions and proper procedures for their areas(s) of employment. This training will include the requirements of the Respiratory Protection Program (Code of Federal Regulations 1910.134).

3. All training and education will be conducted by health care professionals possessing training on or experience with the most current methods of diagnosing tuberculosis, approaches to case management, and current public health practices.
4. Affected employees shall be trained regarding the hazards and control of tuberculosis. The following subjects will be discussed:
    a. The cause and transmission of tuberculosis.
    b. Definition of “infectious or active.”
    c. The distinction between tuberculosis exposure, tuberculosis infection, and tuberculosis disease.
    d. The purpose and interpretation of tuberculosis skin testing, including the significance of a skin test conversion.
    e. The signs and symptoms of tuberculosis.
    f. The reporting mechanism of the signs and symptoms of tuberculosis.
    g. The purpose of preventive therapy.
    h. The risk factors for tuberculosis disease development.
    i. The treatment of tuberculosis and the origin and prognosis of MDR tuberculosis.
    j. The purpose of surveillance, and the recommended follow-up of positive skin tests.
    k. Site specific protocols.
    l. Availability of tuberculosis-related counseling.
5. Training will be given to all employees in covered facilities upon initial employment, after a transfer into designated area(s), and after changes in operations. This training will be documented and will require an annual review. Training will also include, if applicable:
    a. Purpose, proper selection, fit, use and limitations of personal protective equipment.
    b. Engineering controls in use in the employee’s work area.
    c. The critical role directly observed therapy (DOT) plays in preventing the emergence of MDR strains of tuberculosis.
6. Counseling should be available within the work environment for workers with immune system deficiencies or medical conditions which may lead to impaired immunity, those at risk for HIV infection, and those with PPD skin test conversions. These employees will receive counseling on optimizing safety practices, risks associated with the care of patients with infectious disease and alternate job assignments. Employees with these conditions must be counseled with consideration of the Americans with Disabilities Act, and other applicable federal, state, and local laws.
7. Documentation
    a. All training will be documented and maintained/updated by the site specific Tuberculosis Exposure Control Coordinator.
    b. Employee training attendance will be documented.

G. Engineering Controls

1. Engineering measures should be evaluated and monitored according to the appropriate tuberculosis control protocol schedule.

2. Engineering controls cannot be used in place of consultation with experts who can assume responsibility for advising on selection, installation, and maintenance of equipment. Engineering controls issues include:

    a. Local exhaust ventilation (source control method).

    b. General ventilation to decrease contamination of air and control direction of air flow.

    c. Air cleaning with High Efficiency Particulate filters (HEPA).

H. Respiratory Protection

1. Personnel respiratory protection should be used:

    a. By persons entering rooms where patients with known or suspected infectious tuberculosis are being isolated.

    b. During cough-inducing or aerosol-generating procedures on patients with known or suspected infectious TB.

    c. When emergency-medical-response personnel or others must transport, in close vehicles, individuals with suspected or confirmed tuberculosis disease.

    d. In other settings where administrative and engineering controls are not likely to protect persons from inhaling infectious airborne droplet nuclei.

2. Respiratory program requirements include:

    a. Written operating procedures.

    b. Proper selection.

    c. Training and fitting.

    d. Cleaning and disinfecting.

    e. Storage.

    f. Inspection and maintenance.

    g. Inspection/evaluation of program.

    h. Approved respirators, provided when necessary to protect employee health.

I. Coordinate efforts with Department of Public Health Tuberculosis Program Manager for assistance in the following areas:

1. Training staff to institute screening programs.

2. Identifying medical consultants who can assist with diagnosing and managing tuberculosis cases and suspects.

3. Assisting with arrangements, upon request, for referring and following persons on preventative therapy.

4. Assisting in evaluating screening programs.

5. Recommending continuation or discontinuation of screening programs on the basis of their effectiveness.

6. Reviewing surveillance data to identify additional population subgroups for whom screening programs should be developed.

J. Recordkeeping:

1. The employer shall document the following:

    a. Exposure incidents, including the name or other identifier of the employee exposed, the date and location of the incident, a detailed description of the

incident, all follow-up evaluation and treatment, and steps taken to prevent such incidents in the future.

b. Periodic testing of isolation rooms, enclosures, and units.

c. Training maintained/updated by the site specific Tuberculosis Exposure Control Coordinator. Employee training attendance, including the employee's name or other identifier, training dates, and provider.

2. Training documentation shall be maintained for at least three years.

III. Definitions.

A. **Direct threat**

1. Means that there is:

a. A significant risk of substantial harm.

b. An identified specific risk.

c. A current risk, not one that is speculative or remote.

d. An assessment of risk based on objective medical or other factual evidence regarding a particular individual.

2. Even if a genuine significant risk of substantial harm exists, the department must consider whether the risk can be eliminated or reduced below the level of a "direct threat" by reasonable accommodation.

3. Any determination of a direct threat to health or safety must be based on an individualized assessment of objective and specific evidence about a particular individual's present ability to perform essential job functions, not on general assumptions or speculations about a disability.

B. **Emergency personnel** means any person employed by or under the supervision and control of any of the employers specified among affected departments.

C. **Employee** means any person employed by or under the supervision and control of any of the employers specified under "Covered Employers."

D. **High Efficiency Particulate Filter (HEPA)** means 99.97 percent efficient against 0.3 micrometer monodisperse particles.

E. **High hazard procedure** means (1) aerosolized pentamidine administration and sputum induction; or (2) a procedure performed on a suspected or confirmed infectious tuberculosis case which can aerosolize body fluids likely to be contaminated with tuberculosis bacteria including, but not limited to: (a) operative procedures such as tracheotomy, thoracotomy, or lung biopsy; (b) respiratory care procedures such as tracheostomy or endotracheal tube care; (c) diagnostic procedures such as bronchoscopy and pulmonary function testing; or (d) resuscitative procedures performed by emergency personnel; or (3) autopsy, laboratory, research, or production procedures performed on tissues known or suspected to be infected with tuberculosis which can aerosolize tuberculosis-contaminated fluids.

F. **HIV** means the human immunodeficiency virus, symptomatic of Acquired Immunodeficiency Syndrome (AIDS).

G. **Isolation room** means an enclosed space which is used to provide atmospheric isolation in accordance with "Tuberculosis Exposure Control Plan."

H. **Local exhaust ventilation** means ventilation provided by a device, e.g., an enclosed or semi-enclosed exhaust hood, booth, or tent, which removes airborne contaminants at or near their source.

I. **Nosocomial infection** means an infection acquired in a hospital.

J. **Patient** means a person present for the purpose of medical evaluation or treatment.

K. **Reasonable accommodation** requires an employer to make a change in the work environment or in the way things are usually done to accommodate the known physical or mental limitations of a qualified applicant or employee with a disability unless it can show that the accommodation would cause an undue hardship on the operation of its business. However, although a person who has a contagious disease may be covered by the Americans with Disabilities Act (ADA), an employer would not have to hire or retain a person whose contagious disease posed a direct threat to health or safety, if no reasonable accommodation could reduce or eliminate this threat.

   If an individual with a disability cannot perform a marginal function of a job because of a disability, an employer may base a hiring decision only on the individual's ability to perform the essential functions of the job, with or without a reasonable accommodation.

L. **Resident** means an occupant of a correctional facility, mental health institution, homeless shelter or any other residential facility.

M. **Significant contact** means:

   1. Repeated or prolonged contact with high risk groups.
   2. Direct indoor contact with an infectious tuberculosis patient.
   3. Exposure to high hazard procedures which have the potential to generate airborne respiratory secretions:
      a. Aerosolized pentamidine treatment
      b. Bronchoscopy
      c. Sputum induction
      d. Suction procedures
      e. Autopsies

N. **Suspected infectious tuberculosis case** means a person who:

   1. Is known, or with reasonable diligence should be known, by the department to be infected with tuberculosis and has signs or symptoms of pulmonary or laryngeal tuberculosis.
   2. Has a positive acid-fast bacilli (AFB) smear obtained for the purpose of diagnosing pulmonary or laryngeal tuberculosis.
   3. Meets the criteria developed by the department pursuant the Tuberculosis Exposure Control Plan.
   4. Has been identified by the department as having symptoms consistent with tuberculosis.

      The Centers for Disease Control has identified the symptoms of tuberculosis to be: productive cough, coughing up blood, weight loss, loss of appetite, lethargy/weakness, night sweats, or fever.

O. **Tuberculosis** means an infectious disease caused by the bacteria, mycobacterium tuberculosis. It is spread primarily by airborne droplets ("droplet nuclei") produced when persons with undiagnosed or untreated pulmonary tuberculosis disease cough, sneeze, speak, or sing. When inhaled by susceptible persons, the bacteria in these droplets may become established in the lungs. After an interval of months, years, or even decades, the initial exposure may then progress to tuberculosis disease. Approximately 90% of all people infected with tuberculosis will never develop active tuberculosis.

P. **Tuberculosis bacteria** means mycobacterium tuberculosis complex which includes M. tuberculosis, M. bovis, and M. africanum the pathogens which cause human tuberculosis infection and disease.

Q. **Tuberculosis exposure** means an event in which an employee sustains substantial exposure to a confirmed infectious tuberculosis case, or to a suspected infectious tuberculosis case who is determined to have been an infectious tuberculosis case at the time of the incident, without the benefit of all applicable exposure control measures required in the "Tuberculosis Exposure Control Plan." The event may occur through:

1. Potential exposure to the exhaled air of an individual with suspected or confirmed tuberculosis disease.
2. Exposure to a high hazard procedure performed on an individual with suspected or confirmed tuberculosis disease and which has the potential to generate potentially infectious airborne respiratory secretions.

R. **Tuberculosis skin test** means a test of tuberculosis infection conducted in accordance with the recommendations of the U.S. Public Health Service current at the time the test is administered. The tuberculosis skin test is used to detect tuberculosis infection. There are several methods of tuberculin skin tests, but the most reliable is called the Mantoux PPD (purified protein derivative) test. A positive result measured by induration of the skin indicates tuberculosis infection but does not necessarily indicate tuberculosis disease. When the tuberculosis test result is positive, further medical evaluation such as chest X-ray, sputum smears, and cultures are necessary.

A negative result indicates that there probably is no infection by the tubercle bacilli. However, the absence of a reaction to the tuberculin skin test does not exclude the diagnosis of tuberculosis or tuberculosis infection. Because the response to PPD is generated by the immune system, if the immune system is suppressed by, for example, HIV infection, cancer, or diabetes, a response may not be produced. In addition, persons who have been recently exposed may not yet have a reaction to the skin test.